

January 31, 1996

Long-run Ranges
David E. Lindsey

The basic issue facing the Committee today regarding the monetary ranges would seem to be whether or not to raise them to better align them with the probable outcome. The table on page 11 of the bluebook shows staff projections of money, debt, and nominal GDP. The Greenbook sees nominal GDP growing at 4-1/2 percent this year on the baseline assumption of an unchanged federal funds rate. Regarding M2, even with short-term opportunity costs little changed, we think that growth of this aggregate will be boosted some relative to GDP expansion by a slightly flatter yield curve this year than last. With liquid balances thus more attractive relative to longer-term investments, we're projecting a speedup of M2 growth in 1996 to 5-1/4 percent, from its 4-1/4 percent pace last year. The implied decline in the velocity of M2 we're projecting, about 1/2 percentage point, follows no change in V2 last year.

For M3, we foresee a slight moderation from last year's 6 percent pace to 5-3/4 percent this year. While depository credit growth is expected to slow somewhat more quickly, the elimination last December of FDIC insurance premiums for well-capitalized banks should heighten their willingness to issue wholesale deposits, providing some support to M3 growth.

The slowdown in depository credit mirrors the deceleration we foresee in domestic nonfinancial debt. We think consumer credit growth will be moderated by restrained consumer durable spending. Business borrowing also should ease off this year as inventory investment slows.

Growth of debt of 4-1/2 percent is projected to match that of nominal GDP.

As shown at the top of page 14 in the bluebook, debt growth also matches that of nominal GDP in the projections that assume an easier or tighter policy stance. Under all three projections for this year, the growth of debt runs in the middle portion of the 3-to-7 percent provisional debt range chosen by the Committee last July, shown in the column labeled alternative I. Accordingly, in the next two columns, which give alternative ranges, we have retained the 3-to-7 percent debt range.

The staff projections shown for M2 and M3 are less well aligned with the Committee's provisional ranges. Under the baseline projection of a 5-1/2 percent funds rate, M2 would run a bit above the 5 percent upper bound, while projected M3 growth nearly reaches its 6 percent upper bound. Easier policy, by reducing opportunity costs and raising nominal income, would be even more likely to produce M2 and M3 outside the provisional ranges.

To clearly encompass the staff baseline projections, an upward adjustment to the provisional ranges for M2 and M3 of 1 percentage point would be needed, as in alternative II. To center approximately the staff baseline projections around their midpoints, the upper and lower bounds of the provisional ranges need to be raised by 2 percentage points, as in alternative III.

In presenting the rationales for each of the three alternative ranges, the bluebook did not counsel reemphasizing M2 and M3 as intermediate targets or even as information variables helping to guide the policy stance. To be sure, major and persistent deviations of money growth from expectations would need to be examined for whatever light

they might shed on the credit intermediation process and the economic outlook, as was done during the credit-crunch episode in the early 1990s. And, in the past couple of years, M2 and M3 have behaved, on average, more in line with historical patterns. Even so, we believe that much more experience would be needed regarding the behavior of the broad aggregates in a variety of circumstances before seriously contemplating an upgrading of their policy role.

Indeed, uncertainty about intermediate-term M2 behavior is the main reason the Committee established its provisional 1-to-5 percent range for this year last July. Rather than bracketing the most likely growth of M2 this year, this range was intended to serve as a benchmark for secular M2 growth under conditions of price stability with the resumption of a stable long-run average V2. That range, centered on 3 percent, then would accommodate 2 percent growth in real potential output along with a 1 percent trend in measured inflation. The Committee in choosing this range indicated in its report that M2 growth near the upper bound this year could prove consistent with the Committee's expectations for nominal GDP. If the FOMC instead wished to use the announced ranges to communicate to the public the likely growth of broad money in the current year associated with its expectations for macroeconomic outcomes, then alternative I would seem to be too low.

Your expectations for the economy are not indicative of intentions to hold down growth in nominal GDP to rates that would produce money growth in the alternative I ranges. Rather, they are similar to the Greenbook baseline forecast. The 1 percent higher ranges of alternative II, at a minimum, hence would be required to clearly encompass the growth of broad money likely to be consistent with your economic outlook. Money would be in the upper portion of

their alternative II ranges, but this may be an attractive attribute, if the Committee wishes to communicate its intention to resist surprises to nominal GDP and inflation more vigorously if they are on the upside than on the downside. In such circumstances, as consistent with an "opportunistic" approach to price shocks, the aggregates would be likely to deviate from expectations by more in a negative direction than in a positive direction. Hence, the point expectation for money growth absent surprises could legitimately run above the midpoint of the annual range.

Alternative III better centers the staff baseline projections for M2 and M3 around the midpoints of the ranges. This alternative thus might be preferred if the Committee wished the ranges to be oriented toward conveying expectations of the money growth in the current year consistent with economic projections. Such reasoning in favor of this alternative would be strengthened to the extent you thought that significant further policy easings this year would be needed to achieve the Committee's projected economic outcome, in contrast to the Greenbook analysis. Such easings would additionally bolster anticipated money growth relative to the staff baseline projections.

January 31, 1996

Policy Alternatives Briefing
Donald L. Kohn

As background for your decision today, I thought it might be useful to say a few words about policymaking in the face of economic uncertainty. Policymakers always complain about "unusual uncertainties", but those complaints might have particular merit at the current moment: In addition to the usual questions about the factors affecting spending, key data have been delayed, both the short- and long-run fiscal prospects are particularly murky, and the behavior of costs and prices has raised the possibility that the inflation process has changed in a fundamental manner.

Much of this can be translated--albeit very loosely--into uncertainty about the equilibrium real interest rate. In practice, the odds are pretty high that any particular estimate of the equilibrium funds rate will be off the mark significantly, partly because changing economic conditions imply a continually shifting equilibrium. The exercise in chart 3 of the bluebook, which is reproduced as the first exhibit in the package labelled "Monetary Policy Briefing", was intended to address the consequences of misjudging the equilibrium real rate. The upper panel shows what happens to inflation if the Committee holds the nominal funds rate along a predetermined path--the baseline--when the underlying real rate has in fact shifted.

Two inferences can be drawn from this panel. One is that evidence of movements in equilibrium rates or errors in judgment may be very slow to emerge. We have posited a large shift in the equilibrium rate, but in the fourth quarter after the change, inflation rates diverge from baseline by only .2 percent. To be sure, there is likely to be collateral evidence that underlying conditions are diverging from expectations. For example, an unexpected shift in demand that changed the equilibrium rate would be reflected in the unemployment rate as well as in inflation; but even for our sizable shock, deviations in the unemployment rate are small enough after a year to be within a reasonable range of uncertainty about the true value of the NAIRU. Moreover, changes in supply, rather than demand, that shifted equilibrium rates would be detectable primarily through the behavior of inflation itself. The second inference is that, after a while, the costs of holding the nominal funds rate at the wrong level escalate rapidly, as unanticipated inflation outcomes push the real rate further from its new equilibrium.

In the lower two panels, we assumed that the Committee recognizes the problem after a year and responds to bring the inflation rate back to its baseline by the end of the simulation period. To do that, the nominal funds rate must be increased or decreased quite substantially to take account of the change in the equilibrium rate, the effects

of the temporary increase or decrease in inflation on the realized real rate, and the effects of the recognition lag. That lag has meant that there was a period of inadvertent stimulus or restraint; if inflation is to be returned to its original path, policy actions must compensate by overshooting equilibrium for a while.

We recognize that the illustrated reaction to a downward shock doesn't make much sense in the context of the Committee's price stability objective. If instead, the Committee were following an "opportunistic" disinflation strategy, policy ease would be less pronounced, so that the Committee could lock in the unanticipated, but nonetheless welcome, disinflation in train. In preparing the bluebook, we had problems simulating this response in the full staff model. We tried it with more success in the MPS model, which has a less complex and complete foreign sector, and the results are shown in the upper panel of your next exhibit. After the initial lag, the funds rate under opportunism, shown by the long dashed line, is taken down to about its new equilibrium value to put the economy back at its potential. As you can see from the lower panel, under this strategy, inflation levels out at a new, lower rate.

When starting with some inflation, the asymmetrical response to shocks inherent in an opportunistic strategy will produce higher average real interest rates over time as the economy is hit by both positive and negative shocks. It

is these higher real rates that eventually produce price stability. Compared to a deliberate disinflation strategy, under most circumstances, opportunism would produce lower real rates and a longer path to price stability. The average level of rates and the time to price stability under opportunism depends on the nature of the shocks hitting the economy. Larger and more frequent shocks imply a faster track to price stability, because the Committee has more opportunities to respond asymmetrically.

Another shortcoming of the simulations shown in the bluebook is the lack of a forward-looking bond market in the model. The single panel in Exhibit 3 illustrates--once again using the MPS model--the effects of different assumptions about the bond market on the policy response to an upward shock to aggregate demand. Because the bond market anticipates your actions, long-term rates rise to the levels needed to counter the inflation impulse with much less movement in the federal funds rate. Your responses can be more measured, though ultimately of course you must raise rates to offset the inadvertent stimulus and take account of the higher equilibrium. I haven't shown the simulation, but the effects of forward-looking markets are especially striking when those markets are adjusting now to a future change in the equilibrium funds rate--say because of a legislated, but delayed, fiscal policy initiative. In these circumstances, models will frequently give seemingly perverse

policy prescriptions--for example to ease in the face of a tax cut when such a cut scheduled several years in the future raises bond rates. While one wouldn't want to take such a result too seriously, it does highlight the difficulty in determining the current equilibrium funds rate when markets are reacting to prospective developments.

It is difficult to draw clearcut lessons from these stylized exercises for the conduct of monetary policy. One reason, as noted in the first point on the next page, is that there are several types of uncertainties complicating the conduct of monetary policy. The simulations dealt with just one, the level of the real equilibrium rate, because that seems to encapsulate the sorts of "unusual uncertainties" now facing the Committee. But a second broad type of uncertainty concerns the transmission of policy--that is, the response of the economy to a change in interest rates. Vice Chairman Blinder often cited this in discussing the case for cautious monetary policy actions. Although in concept, and in very simple models, the two types of uncertainties might be separable, in fact they probably interact in complex ways; it wouldn't be surprising if an increase in uncertainty about the level of the right rate was accompanied by greater uncertainty about how the economy would react to an actual rate adjustment.

Nonetheless, I think the simulations did leave a few tentative lessons behind, which may be applicable to the

current situation of uncertainty about the level of the equilibrium rate. One is that slow reactions to changed circumstances risk policy errors that can be difficult and costly to reverse--in the parlance of the FOMC, sluggish policy risks "getting behind the curve". Even when uncertainty about the equilibrium real rate has increased, policymakers need to form a judgment about whether the equilibrium has shifted, and then, if necessary, make at least some adjustment. The simulations showed that it may take a while for definitive evidence to emerge, and that waiting until one is quite confident that an action is called for can too easily result in accumulated inflation pressures or economic weakness that would ultimately require much stronger policy action to correct.

In making its judgment about the equilibrium real rate, the Committee would need to consider whether changes in uncertainty haven't affected the equilibrium rate itself. Bond markets that are more uncertain tend to build in higher liquidity premiums--and we may have seen a bit of this in recent weeks as expected volatility rose. Spenders facing greater uncertainty about jobs or about government support might tend to cut back a bit on purchases if they are risk averse, saving more for the heightened possibility of a rainy day.

Another lesson of the simulations is that a bond market that correctly anticipates the Committee's actions

can play a helpful stabilizing role, allowing the Committee to move cautiously, at least for a time. But, for the "bond market vigilantes" to be helpful, they need to understand the Committee's ultimate intentions so they can take a reasonable guess at its actions under various circumstances. To the extent the Committee can clarify its objectives, it will at least raise the odds that financial markets will reinforce rather than undercut achieving those objectives.

Moreover, greater uncertainty implies the need for flexibility in policy making. The difficulties of gauging the appropriate rate at any point in time and the likelihood that circumstances will change suggest that policy adjustments may need to be frequent. And those adjustments might involve shifting course without necessarily having eased or tightened a great deal. To be sure, frequent small adjustments in policy, including course reversals, may be difficult to explain to the public and could confuse markets about Federal Reserve objectives and strategies. But those costs would have to be weighed against the benefits of reducing the odds on persistent policy misalignments.

Finally, an opportunistic strategy entails a particular kind of flexibility--stronger reactions to possible increases in inflation than to possible decreases. In effect, this is what the Committee has been doing for the last 10 or more years--responding promptly and forcefully to possibilities that inflation could rise and more cautiously

and by less to the possibility that inflation might fall short of expectations. This pattern is what has produced further disinflation since the economy emerged from the recession of the early 1980s.